

**CLASS SPECIFICATION**  
**County of Fairfax, Virginia**

**CLASS CODE:** 6387

**TITLE:** HVAC TECHNICIAN II

**GRADE:** S-20

**DEFINITION:**

Under general direction, serves as a lead HVAC master-level mechanic, performing and assisting other mechanics in diagnosing and repairing HVAC equipment with complex, unusual and/or very difficult problems; and performs related work as required.

**DISTINGUISHING CHARACTERISTICS OF THE CLASS:**

The HVAC Technician II differs from HVAC I in that the HVAC Technician II performs the more complex diagnostic HVAC repairs and serves as a lead, master-level technician, whereas the HVAC Technician I performs routine journey-level HVAC work.

**ILLUSTRATIVE DUTIES:**

Performs the most complex troubleshooting and repair of industrial and commercial mechanical, air conditioning, heating and ventilating equipment and control systems;

Serves as lead mechanic, assisting technicians in diagnosing and repairing equipment with unusual or very difficult problems;

Guides, directs, instructs, inspects, and approves work performed by team members;

Coordinates with the Energy Management Section regarding the overall operation and efficiency of the HVAC Energy Management Systems;

Troubleshoots, repairs, and maintains complex computer-operated direct digital control (DDC), energy management control systems, and related software programs, to include programmable microprocessors, central processing units with multiple analog and digital inputs and outputs, transducers, thermistors, and electric and electronic damper and valve actuators;

Troubleshoots, repairs, calibrates, and maintains complex pneumatic control systems, to include components such as receiver controllers, signal selectors, pneumatic reversing relays, temperature transmitters, direct and reverse acting pneumatic thermostats, pneumatic electric switches and electric pneumatic switches, pneumatic damper and valve operators, air compressors, and refrigerated air dryers;

Troubleshoots, repairs, and maintains complex mechanical, air conditioning, heating and ventilating equipment such as chillers (including centrifugal, reciprocating and screw types), air conditioners, heat pumps, oil- and gas-fired hot water and steam boilers, oil and gas furnaces, cooling towers, pumps, air handlers, exhaust air units, make- up air units, duct air conveyance systems, variable air volume systems, variable/volume temperature systems, multi-zone units, electrical power and control circuits, time clocks, gas piping, fuel oil supply piping, fossil fuel burning device flue gas systems, condensate pump and drain lines, fan coil units, condensing units, unit heaters, radiant and fan forced heaters, and hydronic heating and cooling systems;

Carries out designated procedures for seasonal start-ups and shut-downs;

Diagnoses and troubleshoots building air comfort and temperature problems; air distribution, air balancing, or stratification problems; and building insulation or vapor barrier deficiencies;

Ensures mechanical systems are running at peak efficiency by inspecting equipment for operating efficiency and safety standards;  
Ensures energy management and energy saving strategies are maintained and implemented properly and efficiently;  
Monitors and inspects construction projects and contract work to ensure compliance with contractual agreements and with national, state and local code requirements;  
Inspects work in progress and upon completion for conformance with prescribed specifications and safety standards;  
Maintains records of work performed and parts and materials used;  
Maintains records of equipment failures and repairs;  
Orders parts for emergency and routine repairs;  
Maintains records of equipment operation logs to include temperature, pressures, volts, amps, combustion efficiency reports, safety inspections, and equipment refrigerant records;  
Produces HVAC system and efficiency reports that identify system problems or confirm proper operating conditions and recommends repairs or improvements.

**REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES:**

Extensive knowledge of HVAC and related systems to lead diagnostic tasks for complex maintenance and repair activities;  
Knowledge of the standard practices, methods, tools, and materials common to the HVAC trade;  
Knowledge of the building and fire codes related to work performed in the HVAC trade;  
Knowledge of the occupational hazards and safety precautions of the trade;  
Working knowledge of operations and maintenance of buildings and building systems to include heating, ventilation and air conditioning, electrical, plumbing, and energy systems;  
Working knowledge of the use of Direct Digital Controls, personal computers, and related software to operate systems, identify problems, and repair equipment;  
Ability to read and interpret blueprints, as-built control diagrams, and HVAC equipment electrical schematic control wiring diagrams, and to use these in determining proper system operation, troubleshooting, and repair of HVAC systems;  
Ability to use tools and equipment pertinent to the trade, including combustion efficiency testers, electrical meters, refrigerant charging charts, vacuum pumps, micron gauges, refrigerant electronic leak detectors, infrared temperature testers, pneumatic test equipment, electronic temperature testers, micro amp flame signal testers, gas pressure testers, manometers, air balancing test equipment, water balancing test equipment, electronic refrigerant charging scales, propane torches, map gas torches, oxygen and acetylene torches, refrigerant reclaim and recovery equipment, and hand and power tools;  
Ability to lift, stoop, bend, crawl, and work in tiring and uncomfortable positions and from ladders and scaffolds;  
Ability to work in uncomfortably hot or cold temperatures.

**EMPLOYMENT STANDARDS:**

Any combination of education, experience, and training equivalent to the following:  
High school diploma or G.E.D. issued by a state department of education; PLUS

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Two-year technical degree in air conditioning functions such as heating, cooling and ventilating,  
AND Five years of progressively responsible air conditioning or HVAC experience;

OR

Completion of an apprentice-level vocational training program in air conditioning; PLUS  
Three years of progressively responsible air conditioning or HVAC experience.

**CERTIFICATES AND LICENSES REQUIRED:**

Valid state motor vehicle license;

Universal refrigerant recovery license;

Valid journeyman certification from the state of Virginia.

Some positions identified by DHR may require Master Mechanical Licensure.

**NECESSARY SPECIAL REQUIREMENTS:**

None.

ESTABLISHED:

June 2, 2006